ABSTRACT

A chemically bonded biomaterial element composed of an inorganic cement, exhibiting minimal dimensional changes upon hardening and long-time use, improved mechanical properties and improved translucency. An algorithm to describe the micro-structure is expressed as

$$\lambda = \frac{d*(1-V_F)}{(V_F)}$$

where λ is the distance between filler particles of mean size d, and V_F is the volume content of non-reacted cement and added filler, and where ~~$\lambda = 10\ \mu m$~~ $\underline{\lambda \leq 10\ \mu m}$. The invention also relates to a device in connection with the preparation of a chemically bonded biomaterial element according to the invention.